

OCT 16-17 2024 HOUSTON NRG Center

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# ADVANCE CONFERENCE PROGRAM

**HEAT-EXCHANGER-WORLD-AMERICAS.COM** 



# OCTOBER 16<sup>TH</sup> — 17<sup>TH</sup>, 2024 NRG CENTER HOUSTON, TEXAS

## DAY ONE - OCTOBER 16TH, 2024

| 10:00 AM           | Expo opens   |  |  |  |  |  |
|--------------------|--|--|--|--|--|--|
| 10:00 AM           | M Keynote 1 Bridging the Gap- Insights From the End User to Supplier - Mark Ruffin, <b>Teadit</b>  |  |  |  |  |  |
| 10:30 AM           | AM Keynote 2 Improving Reliability and Avoiding Trainwrecks through Operational Awareness - Chris Cary, <b>Dow (Retire</b>   |  |  |  |  |  |
| 11:00 AM -12:30 PM |  | Panel Discussion: Best Practices & Lessons Learned |  |  |  |  |
|                    | Panel Moderator: Chris Cary, Dow  Heat Transfer operators may encounter challenges related to design, maintenance, thermal stress, or economic factors. Implementing optimal strategies for heat transfer equipment is essential for maintaining overall operation, while ensuring an extended lifespan of its components. This panel will discuss best practices to address these complex issues and explore comprehensive strategies to achieve peak performance, enhance safety, and improve economic sustainability of heat transfer equipment.  Panelists:  TBD, Dow  Mark Ruffin, Teadit  Charles Federle, BASF  John Burke, Invista   |  |  |  |  |  |
| 12:30 PM - 1:30 PM | Lunch  |  |  |  |  |  |
| 1:30 PM - 3:00 PM  | Panel Discussion: When is an Upgrade Not an Upgrade?   |  |  |  |  |  |
|                    | Panel Moderator. Scott Hamilton, VSP Technologies  Upgrading heat transfer equipment can be increasingly detrimental to its overall performance and may not yield desirable results. Operators must consider potential disruptions and accurately analyze cost-benefits prior to implementing a potential upgrade. This discussion will explore key elements that are vital to making informed decisions about upgrading all types of heat exchangers exchangers, including considerations related to fouling, metallurgical changes, and equipment upgrades. Attendees will gain insight into the technological challenges and cost implications involved in these tasks to ensure reliability and longevity of the equipment.  Panelists:  Dale Norman, Teadit  Naomi Jabbari, S&B Engineers & Constructors  Bryan Glidden, BASF |  |  |  |  |  |

#### 3:00 PM - 4:30 PM

#### Panel Discussion: The Pitfalls of Testing

#### Panel Moderator: Dinesh Baksi, Brask

Heat Transfer equipment requires significant testing that can introduce complex challenges that contribute to a major portion of the cost associated with new equipment. Ongoing testing is essential to monitor the life expectancy of the heat transfer equipment, however there is a possibility of adding complexity to these routine assessments. In this discussion, attendees will explore the various pitfalls that are encountered during testing, pivotal strategies utilized to optimize testing, and managing associated costs effectively.

#### Panelists:

· Chris Cary, Dow

- John Ferguson, Acuren
- Jan Contreras, Logan Industries
- · Craig Sullivan, Heat Transfer Tubular Products
- · John Burke, Invista
- · James Mitchell, Plastocor

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# OCTOBER 16TH - 17TH, 2024 **NRG CENTER** HOUSTON, TEXAS

## **DAY TWO - OCTOBER 17<sup>TH</sup>, 2024**

| 10:00 AM            | Expo opens  |                                       |   |   |  |  |
|---------------------|---|---------------------------------------|---|---|--|--|
| 10:00 AM            | Keynote 3 Changes to Skills Required in the Digital Information Era - Bill Ashenhart, Engineering Consultant  |                                       |   |   |  |  |
| 10:30 AM            | Keynote 4 Heat Transfer & Sustainability - Naomi Jabbari, S&B Engineers & Constructors  |                                       |   |   |  |  |
| 11:00 AM - 1:00 PM  | Design, Fabrication & Testing<br>Session Chair: Bill Ashenhart,<br>Engineering Consultant   |                                       | Emissions, Leak Prevention & Energy Transition<br>Session Chair: Naomi Jabbari<br>S&B Engineers & Constructors  | Emerging Technologies<br>Session Chair: Jack Piparia, Technip Energiess   |  |  |
|                     | Thermal design requires an experienced professional, adequate software tools, and thorough understanding of process conditions. It is critical that during the design phase, materials selection takes into account how the equipment is going to be fabricated, as some materials add more layers of complexity to fabrication. Testing & Inspection are part of design codes and are often supplemented by end-user requirements. They pose technological and administrative hardships on the industry and are responsible for a significant part of the cost of a new equipment. This workshop will discuss some typical challenges encountered by designers and fabricators, and welcome discussions related to advances in NDE techniques, new standards, and common challenges in implementing testing & inspection procedures.  **Retubing of Shell & Tube Heat Exchangers - Dinesh Bakshi, Brask**  **What Information is Necessary When Specifying a Shell & Tube Heat Exchanger? - Miles Duvall, Energy Exchanger Company & TEMA*  **Doing the Math, Understanding, & Calculating Tube Expansion - Eric Tinnerman, Equipment Group International - EGI  **Compact Heat Exchangers - Design, Fabrication, Selection & Applications - Amit Parchure, Tranter, Inc.  **A Multifaceted Approach When Designing Fired Heaters - Shailendra Seecharan, Enerquip Thermal Solutions |                                       | The global push towards emissions abatement continues to place itself at the forefront as the latest emissions monitoring systems make significant strides across the board. Attendees will have the opportunity to share dynamic insights about optimizing equipment performance, the implementation of effective emissions control measures, and regulatory compliance in heat transfer equipment. This session will explore strategies and solutions aligning with sustainable operations that aid in the energy transition.  PFAS or Not-Fluoropolymers (PTFE) Are Key to Reducing Fugitive Emissions and Can Generate A ROI TooTim Goedeker, Teadit  Understanding Complexities of Sealing in New Energy, Josmar Cristello, Teadit  Meeting Heat Exchanger Challenges from the Emerging Carbon Neutral Technologies - Vijay Chakravarthy, Byron Black, & Prabhu Bala, Precision Equipments  CorruKamm Gasket Success in FCCU Oil Slurry Heat Exchangers - Aaron Patterson, Lamons  Comparison of Heat Exchanger Materials with High Chemical Resistance - Tom Patnaik, Thaletec USA Inc. | <ul> <li>This workshop will highlight new and emerging technologies on the horizon, revolutionizing the heat transfer industry.</li> <li>Digital-twin Models: Optimizing Heat Exchanger Systems - Greg Magness, HTRI</li> <li>Design Innovation for High Temperature and Pressure Heat Exchangers - Rashik Bansal, Kellogg, Brown &amp; Root (KBR)</li> <li>Maximising Heat Transfer Efficiency through Boiling and Condensation Phase Changes - Nathan Hill, CALGAVIN</li> <li>How to Minimize the Impact of Corrosion on Cycle Time During Manufacturing, Operation &amp; Layup - James Holden, Cortec Global Services</li> <li>Looking Beyond Alloys. Advances in Non-Metallic Heat Transfer Materials &amp; their Benefits - Joan Bova, CG Thermal</li> <li>Advancing Welding Technology for Heat Exchanger Tubes: From TIG to Laser Welding and Beyond - Manfred Seewald, Fischer Group</li> <li>Using AI to Manage Heat Exchanger Fouling - Dinu Ajikutira, Canvass AI</li> </ul> |  |  |
| 01:00 PM - 02:00 PM | Lunch Break   |                                       |   |   |  |  |
| 2:00 PM - 5:00 PM   |   | aning & Antifouling<br>: Mayra Lomas. | Emerging Technologies   | Coatings, Materials & Corrosion   |  |  |

#### Session Chair: Mayra Lomas, **S&B Engineers & Constructors**

Fouling affects nearly all types of heats exchangers in industries across the board. It not only hinders plant capacity and increases energy consumption, but it can also lead to mechanical failure. The costs associated with fouling are in the million-dollar range for many businesses, mainly due to maintenance and energy losses.

- Comparison of Heat Transfer & Fouling Rates in Cooling Water Service for Smooth and Internally Finned Heat Exchanger Tubing - Craig Thomas, Neotiss & Rebecca Osteen, Southern Company
- Nanobubble Vapor Infusion for Heat Exchanger Fouling Prevention - Michael Radicone, HTRI
- The Future of Heat Exchanger Maintenance Ken Marko, Wheelhouse Industries LLC
- · Is Your Heat Exchanger Clean-As-New? Know Before It Goes Back In Service- Roberto Tomotaki, Byron Kieser, Himanshu Joshi, CLEAN AS NEW
- Exchanger Fouling Reduction Using Surface Treatments And Coating - Alexander Barre, Curran International
- Hydroblast Tooling Optimization & its Results Tim Tormey, StoneAge, Inc
- Next-Generation Antibiofouling Coatings for Seawater Heat Exchangers - John Brosnahan, Luna Labs USA LLC

# Session Chair: John Burke, Invista

This workshop will highlight upcoming innovative technologies aiding in enhancing heat transfer operations and optimizing safety.

- Energy Optimization with VSD In Air Coolers Uma Sarkar Khan, KBR
- AOGV Mechanical Isolation Technology Restores Flow Capacity At A Supermajor Refinery Without Halting Production - Michael McCue, Izomax
- Incremental Countercurrent (ICC) Regenerative Heat Exchangers Baisheng Zou, Cypress Systems LLC
- Innovative Ultra Low-Noise Axial Fan Solution for High Efficiency Applications - Carlo Gallina, Cofimco
- Increasing Energy Production Using Enhanced Surfaced Hydrophobic Tubes for Condensation Heat Transfer
- Dimpled Tubes For Turbulence Enhancement -Murray Baker, Teralba Industries
- World Michael Kemp & Marcel Botha, Sonihull Ultrasonic

## Session Chair: Scott Hamilton, VSP Technologies

Material selection can determine the way equipment is fabricated as some materials create more layers of complexity than others. This workshop will discuss the importance of proper material selection, corrosion resistance technologies as well as advances in coatings that improve corrosion prevention in the heat transfer industry.

- Performance Tests of Tube Enhancements & Coatings -Elijah Crosby, HTRI
- An Overview of Special Material Requirements to Consider When Specifying Duplex Stainless-Steel Tubes - Luiza Esteves, Alleima
- Comparison of Parallel-pin & Tapered-pin Tube Expansion Methods and Implications for Corrosion Resistance - Ben Lambers, Elliott Tool Technologies
- Tube Coating Can Maintain Condenser Performance & Delay Condenser Retubing - James Mitchell, Plastocor
- Advance Materials for Metal Dusting Corrosion Resistance- Alloy 699XA - Venkat Ramesh, Tubacex
- DetaClad (Explosion Cladding) Clad Solutions for Nitric Acid and Nitrates with a New Tested Super-ferritic 470LI - Matt Shufran, NobelClad

## Applications - David Kukulka, Rigidized Metals Corp.

# Antifouling Systems and their Role in a Sustainable

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#### A MESSAGE FROM THE CHAIRMAN

I am looking forward to being the Chairman of the Heat Exchanger World Americas Conference & Expo 2024. This wonderful event provides endless opportunities to allow the heat transfer community to come together. Attendees will have the chance to partake in new ways of thinking by accomplishing upcoming goals through extensive knowledge transfer, learning of the latest innovations in heat transfer equipment, cost-saving initiatives, practical solutions, and technical demonstrations. This event will serve as a stage for networking opportunities with some of the most talented individuals in this diverse industry.

Throughout my career, I have gained a wealth of knowledge and expertise in sealing, bolting, training, and technical support. My position at Teadit North America in Pasadena, TX has allowed me to oversee its team of Outside Sales Managers, Application Engineers, and Field Service Technicians. As an SME in Bolted Flange Joints subject matter, I have authored and maintained standards for the assembly of bolted-flanged connections and valve packing installations. During my career, I have had the opportunity to assist end users and OEMs in providing the necessary training to understand bolted flange joints, sealings and gaskets, which is necessary for understanding their connection to heat transfer equipment. Having the opportunity to educate and train is vital to ensuring your heat

As we anticipate meeting one another this October, we invite you to join us at the NRG Center, with your ideas and topics focused on heat exchanger costs, design, performance, maintenance, and efficiency in the oil and gas industry. I am confident that there is something for every professional from all levels of expertise at the Heat Exchanger World Americas Conference and Expo 2024. I am looking forward to seeing you all there!

transfer equipment meets maximum performance; this way, users extend the life expectancy of their assets, improving processes and mitigating common challenges.

Mark Ruffin, Vice President of Sales - Teadit North America

### A MESSAGE FROM THE VICE-CHAIRMAN



I am honored and excited to be the Vice-Chair for the Heat Exchanger World Conference & Expo Americas 2024.

This conference is unusual in the Heat Exchanger arena because the attendance is from all aspects of the field of heat exchange equipment. Attendees, sponsors, sub-sponsors, and presenters represent the gamut from the raw material and fabrication equipment suppliers, EPC organizations, heat exchanger fabricators, end users, and even further to those responsible for maintaining the equipment over its lifespan.

The Texas & Louisiana Gulf Coast has long been recognized as the Energy Capital of the world with Houston being at the center. The location of this Expo at the NRG Convention Center is a recognition of the growth of the Conference and its importance to the Gulf Coast.

On a personal basis, one of my primary reasons for coming to an event of this type is that I always discover or learn something new. I use the word "discover" because that is how I view learning new things. I am using my curiosity to discover and learn.

At the Heat Exchanger World Americas Conference and Expo 2024, people from across the spectrum of heat exchanger equipment can attend unique and relevant technical presentations, network with industry peers alongside discovering new equipment and techniques to make their jobs easier. This conference offers something for everyone, no matter what industry they work in. I believe that every attendee will "discover" something new and applicable to their daily job from their participation.

I am looking forward to meeting all of you at the 2024 Heat Exchanger World Conference & Expo Americas at Houston's NRG Center on October 16th & 17th!

Bill Ashenhart PE, Heat Transfer SME - S&B Engineers and Constructors

#### **STEERING COMMITTEE**

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Biren Patel, Process & Equipment Engineering - Covestro

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Chris Grice, VP of Field Services - Ward Vessel & Exchanger

Chris Jungers, Vice President – Process Equipment – Cust-O-Fab

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Cuong Nguyen, Heat Transfer Technical Director I - Fluor

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Kimberly Derry, Marketing and Business Development - Superior Plant Rentals

Kyle Dunn, Business Owner and Compliance Manager - Dunn Heat Exchangers

Lauren Moran, Manager Technical Support – HTRI

Louis Gonzalez, Marketing and Communications Manager - Flexitallic Group

Mike Nemeth, Chief Development Officer/Principal – Elliott Tool Technologies Ltd.

Mike Prevost, Vice President - Specialty Services - Ohmstede Industrial Services

Naomi Jabbari, Heat Transfer Engineer – S&B Engineers & Constructors

Naresh Shah, Technical Director - Worley

Noel Thomas, Heat Transfer Engineer – Bechtel Oil, Gas and Chemical

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